AMSAT News Service Weekly Bulletins
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AMSAT NEWS SERVICE
ANS-198

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

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SB SAT @ AMSAT $ANS-198.01
AMSAT-NA Symposium Registration Now Online

AMSAT News Service Bulletin 198.01
From AMSAT HQ SILVER SPRING, MD.
July 17, 2005
To All RADIO AMATEURS
BID: $ANS-198.01

Registration for the 2005 AMSAT Space Symposium is now available on-line. The Symposium will be held October 7-9 at the Holiday Inn Holidome in downtown Lafayette, LA. Information can be found on the Symposium web page at: http://www.amsat.org/amsat-new/symposium/

In addition to downloading the registration form, for the first time attendees can now register online through the AMSAT store. Registration forms will also be mailed out with the annual ballots for the AMSAT board of directors. Please see the AMSAT Store registration for more information: http://www.amsat-na.com/SymposiumReg.php

Registration for the Annual Banquet, the Friday Night Shrimp Boil and the Sunday Swamp Tour can all be done at the time you register for the Symposium.

[ANS thanks Emily, W0EEC for the above information]

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SB SAT @ AMSAT $ANS-198.02

AMSAT-UK Colloquium July 29-31

AMSAT News Service Bulletin 198.02
From AMSAT HQ SILVER SPRING, MD.
July 17, 2005
To All RADIO AMATEURS
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Huygens - A First Look at Titan

AMSAT-UK is privileged to have Professor John Zarnecki Principal Investigator for the Surface Science Package on Huygens giving the keynote presentation at the International Space Colloquium to be held at the University of Surrey, Guildford, England from 29th - 31st July.

Professor John Zarnecki's presentation on Friday July 29th will describe the journey of the Huygens probe as well as its final dramatic plunge to the surface of Titan.

Day passes to the event cost £12:50. If required, overnight accom-odation and meals at the University are available. For further details contact Sophie Haigh; Email: s.haigh@sstl.co.uk
Tel: +44 (0)1483 689888

Guildford is close to both London-Heathrow and London-Gatwick airports.

For full details of the programme see:
    http://www.uk.amsat.org/Colloquium/

[ANS thanks Jim, G3WGM, and Trevor, M5AKA for the above information]

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SB SAT @ AMSAT $ANS-198.03
SSETI Express July Update

AMSAT News Service Bulletin 198.03
From AMSAT HQ SILVER SPRING, MD.
July 17, 2005
To All RADIO AMATEURS
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All work on the SSETI Express spacecraft has now been completed and thespacecraft has left its "birthplace" - a cleanroom at the ESA ESTEC facility in the Netherlands. The spacecraft has been packed into its special transport container and is en-route to the launch site at Plesetsk in Northern Russia.

The launch date is still listed as 25th August currently at 06:50 UTC. Arrangements are underway for the launch to be shown live on ASTRA-1G, a Ku band satellite covering most of Europe. Hopefully, these trans-missions will also be streamed at both high and low resolution on the internet.

Full details of all these media resources will be made known as soon as they are finalised. Details of the telemetry downloading and decoding software will be released.

AMSAT-UK will have a team member at the launch site during the launch campaign and intend to provide regular updates during the lead up to August 25th.

See the latest SSETI news on the ESA web page at:
http://www.esa.int/esaCP/SEMPQH6DIAE_index_0.html

[ANS thanks Graham G3VZV for the above information]

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SB SAT @ AMSAT $ANS-198.04
PCSAT2 Planned for Launch on STS-114

AMSAT News Service Bulletin 198.04
From AMSAT HQ SILVER SPRING, MD.
July 17, 2005
To All RADIO AMATEURS
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When STS-114 lifts off it will be carrying an amateur radio payload called MISSE5/PCSAT2. This will be placed on the exterior of the ISS during the third space walk of the mission. More information is available on-line at:
http://web.usna.navy.mil/~bruninga/pcsat2.html

Dave Johnson, G4DPZ, is developing the PCSat2 telemetry web site:
http://www.pcsat2.info

This late-beta test page is currently displaying channel telemetry generated by a simulator which refreshes every 10 seconds approximating the speed when it is under command conditions.

Additional items currently planned include:
- o Graphical Channel History
- o WOD feed (csv file probably)
- o League table of telemetry providers
- o RealTime Eclipse status

PCSAT2 is attached to the ISS and so its operations must be in cooperation with the ARISS communications suite to minimize any mutual interference and to coordinate activities. Here are the capabilities of the PCSAT2 payload:

PCSAT SYSTEM A:

435.275 PCSAT2 DOWNLINK basic 1200 baud telemetry (nominally 1 packet per minute)
435.275 PCSAT2 DOWNLINK User packet digipeater from uplink on 145.825
435.275 PCSAT2 DOWNLINK Occasional user PSK-31 continuous downlink (7 minutes max each time)

145.825 PCSAT2 UP/DOWN User packet digipeater up/down on 145.825

PCSAT SYSTEM B:

437.975 PCSAT2 DOWNLINK periodic Solar Cell data and PCSAT2 telemetry at 9600 baud
437.975 PCSAT2 DOWNLINK TNC-B command downlink at 1200 baud
437.975 PCSAT2 DOWNLINK User Voice Repeater with VHF uplink

[ANS thanks Bob, WB4APR and Dave, G4DPZ for the above information]

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SB SAT @ AMSAT $ANS-198.05

Update Your Keps - ISS Orbit Modified

AMSAT News Service Bulletin 198.05
From AMSAT HQ SILVER SPRING, MD.
July 17, 2005
To All RADIO AMATEURS
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If you have not updated your Keplerian Elements recently your tracking of the ISS may be off.

In preparation of the Space Shuttle's Return to Flight the ISS received one final reboost to increase the Station's altitude for its upcoming rendezvous with Space Shuttle Discovery.

Last week the engines of a Progress spacecraft docked to the Station were commanded to burn for 7 minutes and 20 seconds, boosting the altitude of the Station nearly 4 miles. This second and final reboost puts the Station into position for rendezvous opportunities beginning on the third flight day during most of Discovery's July 13-31 launch window.

[ANS thanks Jacques van Oene for the above information]

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SB SAT @ AMSAT $ANS-198.06
ARISS Status - Week of July 11, 2005

AMSAT News Service Bulletin 198.06
From AMSAT HQ SILVER SPRING, MD.
July 17, 2005
To All RADIO AMATEURS
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1. Upcoming School Contacts

The shuttle STS-114 Return to Flight mission is slated to launch in July and to dock with the ISS. School contacts have been submitted for approval, and will resume as soon as the ISS schedule allows.

2. SuitSat Status

The ARISS-Russia team received the U.S. supplied hardware, and is working on its integration and testing. The team is currently compiling the documentation necessary for certifying the SuitSat hardware for flight.

3. PCSAT2/MISSE5 to Fly on STS-114

As part of an educational outreach program, students at the United States Naval Academy, in collaboration with the DOD and ARISS, and under the direction of Bob Bruninga, WB4APR, designed and developed PCSAT2. This payload will be carried on a Materials International Space Station Experiment (MISSE5) on a Passive Experiment Container (PEC). The PEC (suitcase) will be opened and will carry DOD solar cells on the front side, facing the sun, and the back side will carry the amateur satellite communications system which will include Automatic Position Reporting System (APRS) Packet, FM voice repeater, and 10m PSK-31 transponder. The payload will be launched on the Return to Flight STS-114 mission. It will be deployed via an EVA as an external payload on the ISS.

It will be turned on during the EVA, and become operational 8.5 hours later when its safety timer allows. This project is described in detail on Bruninga's website, "PCSAT2 - External ISS Experiment in the Amateur Satellite Service."
See: <http://www.ew.usna.edu/~bruninga/pcsat2.html>

4. NES Teacher Workshop
A NASA Explorer School Satellite Communication Class will be held at Goddard Space Flight Center during the week of July 18. Orbital elements, how to set up a station, and how to communicate with the ISS will be addressed. In addition, the ARISS -U.S. team at GSFC may schedule some amateur radio time to demonstrate the usefulness of radios in the classroom.

5. Astronaut Training

On Friday, July 8, Kenneth Ransom gave astronaut John Grunsfeld, KC5ZTF, an overview of the ARISS radio system and operations. Grunsfeld is a backup for the Expedition 13 crew.

6. ARISS International Meeting, Guilford, U.K.

Preparations continue for the ARISS International Face-to-Face Meeting which will be held at the University of Surrey in Guil-ford, U.K. Delegates are currently drafting the agenda for the August 1 - 2 conference.

7. ISS Ham Training Manual

ARISS member Dave Taylor has been working on an SSTV manual for the ISS Ham system. He has submitted the final version to Ken-neth Ransom at JSC to be uplinked to the ISS.

8. Space Tourist Resumes Training

Greg Olsen of Sensors Unlimited has resumed his training for spaceflight. He made arrangements through Space Adventures to begin training last fall and stopped due to a medical condition, but has now returned to Star City and is training with the Expedition 12 crew. As the next space tourist, Olsen has expressed an interest in participating in several ARISS school contacts.

[ANS thanks Carol Jackson, KB3LKI, for the above information]

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SB SAT @ AMSAT $ANS-198.07
AMSAT-Italia Developing Ionosfera

AMSAT News Service Bulletin 198.07
From AMSAT HQ SILVER SPRING, MD.
July 17, 2005
To All RADIO AMATEURS
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AMSAT-Italia is currently developing the "Ionosfera" project which aims at supporting the DX Community in predicting the ionosphere propagation conditions.

The project is developed in the framework of European Space Agency's (ESA) programme on "Space Weather" and can be visited at:
http://esa-spaceweather.net/sda/ionosfera/index2.htm

Please have a look, make suggestions and forward the link to other potentially interested people.

One of the things we are trying to do is to correlate the DX activity with the various Space Weather indices. For this we are looking for HF DX logs (best in electronic files) covering the period 01-Sept-2003 through 30-Apr-2005.

Should you or your friends be active on HF DX, could you please support us by providing as many as possible log files? In addition to analysing the data globally, we thank our various contributors by characterising their own location with respect to the Space Weather conditions.

[ANS thanks Florio, IW2NMB, coordinator of the Ionosfera project for the above information]

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SB SAT @ AMSAT $ANS-198.08
Delft University of Technology Announces Delfi-C3

AMSAT News Service Bulletin 198.08
From AMSAT HQ SILVER SPRING, MD.
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To All RADIO AMATEURS
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A group of students from the Department of Aerospace Engineering and Electrical Engineering of Delft University of Technology is developing a new Dutch satellite. Scheduled for launch in 2006, it will be the first university satellite to be flown for the Netherlands.

The Delfi-C3 communications subsystem will operate in the VHF and UHF amateur radio frequency bands enabling radio amateurs worldwide to receive satellite data using a modest equipment setup.

The EEMCS Faculty is developing an advanced transceiver, combining miniaturization with a high DC to RF efficiency and the capability to adapt to different channel conditions. Since transmitting payload data is of utmost importance for the whole mission, the communications sub-system is set up as a dual redundant system, with an AMSAT platform as backup.

Besides transmitting telemetry data, both systems are capable of providing a linear transponder service to the amateur radio community as a returned favor for use of amateur frequencies and their assistance with the telemetry data collection.

For all interested radio amateurs and other people related to the project the team has made the first Delfi-C3 newsletter available at http://www.delfic3.nl/newsletter

You can subscribe to this issue of the newsletter and future ones.

[ANS thanks Wouter Jan Ubbels, PE4WJ, of the Delfi-C3 team for the above information]

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SB SAT @ AMSAT $ANS-198.09
Goddard Amateur Radio Club Shuttle Retransmissions

AMSAT News Service Bulletin 198.09
From AMSAT HQ SILVER SPRING, MD.
July 17, 2005
To All RADIO AMATEURS
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The Goddard Amateur Radio Club, WA3NAN retransmits shuttle radio traffic.
Shuttle retransmission frequencies used include the following:

Band	Frequency	+/- 5 kHz, QRM or Nets
80m	3.860 MHz	
40m	7.185 MHz	
20m	14.295 MHz	
15m	21.395 MHz	
19m	28.650 MHz	
2m	147.450 MHz	

[ANS thanks John, N3KHK, and the Goddard Amateur Radio Club for the above information]

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SB SAT @ AMSAT $ANS-198.10
Membership Challenge Successful, Thank-you WA6FWF and KE9V

AMSAT News Service Bulletin 198.10
From AMSAT HQ SILVER SPRING, MD.
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To All RADIO AMATEURS
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Barry Baines, WD4ASW, AMSAT's VP of Marketing and User Services, reports the membership challenge made by Kevin Schuchmann, WA6FWF to match new membership dues with an equal contribution (up to a total of $1,000.00) in a two week period has been met. A total of 23 AMSAT memberships have been generated since Kevin's appeal on June 27. Most of these are new members (15). However, the other eight individuals are former members with expiration dates going as far back as 10-12 years.

Many thanks to Kevin for promoting this membership appeal and welcome aboard to those that have joined AMSAT in the past two weeks.

Barry commended Jeff Davis, KE9V, for his support in the AMSAT member-ship drive. Barry wrote, "Many thanks for your support of AMSAT in a very imaginative and helpful way. When Kevin Schuchmann, WA6FWF, initiated the Membership Challenge that resulted in 23 AMSAT member-ships in a two-week period, you stepped forward with a commitment to cover the cost of providing a copy of the AMSAT publication "Getting Started with Amateur Satellites" (written by Gould Smith, WA4SXM) to each individual who became an AMSAT member as a result of the Challenge. Not only did your actions reinforce the desire to help our newest members, but it serves as a great example of an AMSAT member taking the initiative to come up with a great way to build support for AMSAT. Thank you for taking this opportunity to make a difference for AMSAT."

[ANS thanks Barry, WD4ASW, for the above information]

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SB SAT @ AMSAT $ANS-198.11
AMSAT Satellite Awards This Week

AMSAT News Service Bulletin 198.11
From AMSAT HQ SILVER SPRING, MD.
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To All RADIO AMATEURS
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Bruce Paige, KK5DO, AMSAT Director Contests and Awards, reports this week, congrats go out to all of the following:

Howard Stephenson, K6IA, 51 on 51 Award #29

To see all the awards visit http://www.amsat.org.

[ANS thanks Bruce, KK5DO, for the above information]

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SB SAT @ AMSAT $ANS-198.12
P3E Mode-UV Transponder Milestone

AMSAT News Service Bulletin 198.12
From AMSAT HQ SILVER SPRING, MD.
July 17, 2005
To All RADIO AMATEURS
BID: $ANS-198.12

William, PE1RAH, developer of the Dutch transponder on the Indian HAMSAT, reports, "I am happy to announce that my MODE-UV transponder design for P3E has completed its initial testing and has been delivered to AMSAT-DL's integration lab at Marburg, Germany. I hope the transponder will work like its elder sister on AO-10, and you all will enjoy it for many years."

[ANS thanks William, PE3RAH, for the above information]

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73,
This week's ANS Editor,
JoAnne Maenpaa, WB9JEJ
WB9JEJ at amsat dot org